

Claims

1. A fitting for attachment to a membrane, said fitting comprising a mounting adaptor to be secured to said membrane, a resiliently deformable part associated with said mounting adaptor and arranged to embrace and hold an initially separate insert, said resiliently deformable part being arranged such that when the mounting adaptor is secured to said membrane and exposed to a force exerted by fluid at one of two sides of the membrane, the resiliently deformable part is urged into gripping engagement with the insert.

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2. A fitting as claimed in claim 1 wherein the mounting adaptor is provided with a flange for arranging and securing the fitting to the membrane.

3. A fitting as claimed in claim 2 wherein the flange is formed from a weldable material whereby it may be welded to the membrane of the structure.

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4. A fitting as claimed in claim 2 or claim 3 wherein the flange is provided with an annular channel.

5. A fitting as claimed in claim 2, 3 or 4 wherein the flange is provided with a rigid ring.

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6. A fitting as claimed in any of claims 2 to 5 wherein the flange is provided with two annular weld areas either side of said channel.

7. A fitting as claimed in any of claims 2 to 6 wherein the resiliently deformable part is joined to the flange.

5        8. A fitting as claimed in any preceding claim wherein the resiliently deformable part comprises a sleeve for receiving the insert, said sleeve joined by a radially extending web to an outer cylindrical part.

9. A fitting as claimed in claim 8 which when in use is in contact with the fluid.

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10. A fitting as claimed in claim 8 or claim 9 wherein the outer cylindrical part is substantially rigid relative to the resiliently deformable part.

11. A fitting as claimed in any of claims 8 to 10 wherein an axial end of the sleeve  
15 is flexibly connected to the outer cylindrical part.

12. A fitting as claimed in claim 11 which when attached to a membrane the axial end furthest from the membrane of the sleeve is flexibly connected to the outer cylindrical part.

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13. A fitting as claimed in any of claims 2 to 12 wherein at location of the joint of the resiliently deformable part with the flange there is provided an annular lip for locating the fitting within an aperture of the membrane and which upon melting welds the edges of the aperture to the fitting.

14. A fitting as claimed in claim 13 wherein the annular lip is bonded to seal the edges of the aperture.

5        15. A fitting as claimed in any preceding claim wherein the insert comprises a substantially cylindrical portion.

16. A fitting as claimed in any preceding claim wherein the insert is provided with circumferential ribs and a circumferential recess there between.

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17. A fitting as claimed in any preceding claim wherein the insert is provided with ribs to engage with said resiliently deformable part.

18. A claim as claimed in any preceding claim where in the insert is hollow.

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19. A fitting as claimed in any preceding claim wherein the insert comprises a valve means.

20        20. A fitting as claimed in any preceding claim wherein the insert comprises a support means for attaching the membrane to a surface comprising at least one suction pad.

21. An assembly comprising a fitting in accordance with any preceding claim for attachment to a membrane of an inflatable structure.

22. An assembly comprising a fitting in accordance with any preceding claim for attachment to a membrane of a liquid container.

5        23. An assembly as claimed in claim 21 wherein the fluid in the inflatable structure comprises a gas.

24. An assembly as claimed in claim 22 wherein the fluid in the liquid container comprises a liquid.

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25. A fitting as claimed in any preceding claim connectable to a further fitting.

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